

What is claimed is:

1. An internal teeth oscillating inner gearing planetary gear system comprising:

an input shaft;

5 an eccentric gear being rotated by the input shaft and having an eccentric inner circumferential surface with respect to a rotational center thereof;

an internal oscillating body being guided by the inner circumferential surface of the eccentric gear and
10 oscillatingly moved thereby, the internal oscillating body having internal teeth on an inner periphery thereof;

an external gear internally meshing with the internal oscillating body, the external gear having slightly less number of external teeth than that of the internal teeth of
15 the internal oscillating body.

2. The internal teeth oscillating inner gearing planetary gear system according to claim 1, wherein a plurality of the internal oscillating bodies are provided in an axial direction with respect to the same eccentric gear.

20 3. The internal teeth oscillating inner gearing planetary gear system according to claim 1 or 2, wherein a gear for meshing with a pinion disposed on the input shaft is disposed at an outer circumferential portion of the eccentric gear, and the input shaft is placed radially outside the eccentric gear.

25 4. The internal teeth oscillating inner gearing planetary

gear system according to claim 3, wherein the input shaft is placed parallel to an axis of the eccentric gear, and the pinion of the input shaft is placed to be on an extension in the radial direction of the internal oscillating body.

5 5. The internal teeth oscillating inner gearing planetary gear system according to claim 3, wherein the input shaft is placed at a right angle to an axis of the eccentric gear, and an orthogonal gear mechanism is formed by the pinion of the input shaft and the gear of the eccentric gear

10 6. A driving method of an inner teeth gearing planetary gear system, the system having an input shaft, an output shaft, an external gear, and an internal oscillating body, the method comprising the steps of:

transmitting rotation of the input shaft to an eccentric
15 gear, the eccentric gear having an eccentric inner circumferential surface with respect to a rotational center thereof;

oscillatingly rotating the internal oscillating body by using the inner circumferential surface of the eccentric gear
20 as a guide surface, the internal oscillating body having internal teeth on an inner periphery thereof and meshing with the external gear through the internal teeth; and

restricting any one of rotations of the internal oscillating body and the external gear, and delivering a
25 rotational component of the other whose rotation is not

restricted for output.